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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,269	08/27/2003	Sudhir G. Rao		6434

49056 7590 04/05/2007  
LIEBERMAN & BRANDSDORFER, LLC  
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GAITHERSBURG, MD 20878

EXAMINER
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WILSON, YOLANDA L

ART UNIT	PAPER NUMBER
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2113

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/05/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/649,269

Applicant(s)

RAO ET AL.

Examiner

Yolanda L. Wilson

Art Unit

2113

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-15 and 23-27 is/are allowed.
- 6) ☒ Claim(s) 28 is/are rejected.
- 7) ☒ Claim(s) 16-22 and 29-31 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/12/07</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 16 is objected to because of the following informalities: 'the group consisting' should be 'a group consisting'. Appropriate correction is required.
2. Claim 22 is objected to because of the following informalities: 'the group consisting' should be 'a group consisting'. Appropriate correction is required.
3. Claims 17,20,21 are objected to because of the following informalities: 'a processor, comprising:' should be 'a processor, said computer-readable instructions comprising:'. Also, 'means in the medium' should be 'computer-readable instructions'. Appropriate correction is required.
4. Claims 29-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Allowable Subject Matter***

5. The following is a statement of reasons for the indication of allowable subject matter: Claims 1-8 are indicated as being allowable because of the following limitations: issuing an operating system ICMP echo to peer nodes in said cluster and to said gateway through said network interface in response to a heartbeat loss detection. Claims 9-15 are indicated as being allowable because of the following limitations: an operating system ICMP echo adapted to be issued to peer nodes in a cluster and to said gateway through said network interface in response to a heartbeat loss detection.

Art Unit: 2113

Claims 23-27 issuing an operating system ICMP echo to said peer nodes and a gateway through a network interface in response to a heartbeat loss.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carter et al. (USPN 5909540A) in view of Yeager (US Publication Number 20050086300). As per claim 28, Carter et al. discloses determining a heartbeat loss in a cluster; validating said heartbeat loss; and localizing said loss in column 31, lines 10-29.

Carter et al. fails to explicitly state configured with a gateway for a network interface.

Yeager discloses this limitation on page 20, paragraph 0255 and page 41, paragraph 0528.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have configured with a gateway for a network interface. A person of ordinary skill in the art would have been motivated to have configured with a gateway for a network interface because gateways are used to connect one cluster of nodes with another network.

***Response to Arguments***

8. Applicant's arguments filed 01/12/2007 have been fully considered. The arguments for claims 29-31 are persuasive and the rejection of these claims has been withdrawn.

Applicant argues on page 8, 'However, it is not merely the configuring of the computer network of Carter et al. that is not present in claim 28. It is the element of detecting a heartbeat loss in the cluster with the specified configuration. There is no teaching, suggestion, or motivation within Carter et al. to modify the network to employ a gateway therein... The Examiner provides a motivation statement to the effect that the motivation stem from use of a gateway to connect one cluster of nodes with another node or cluster in the network, and employs Yeager et al. for this element of the claim not present in Carter et al.."

Examiner respectfully disagrees. As stated in the previous office action the motivation comes from the system disclosed in column 6, lines 5-11 being network nodes within a network system which can be geographically dispersed or located on distinct networks. With this motivation of the nodes being on different networks, it would be obvious for a gateway to be used to connect the different node groupings, disclosed in column 6, lines 12-19, together by a gateway. The heartbeat loss would still be detected in the configuration with the gateway because of the ability of the network to have a gateway for communication purposes.

Applicant also argues on page 8, "The term cluster is a term of art and is not merely a grouping of nodes in a network... Yeager et al. teaches 'network nodes' but

Art Unit: 2113

does not teach that this network of nodes operates as a cluster, as defined by Applicant. More specifically, Yeager et al. does not explicitly teach that the process of determining a heartbeat loss in the network of nodes configured as a cluster... However, gateways are not limited to connecting clusters of nodes in a network. A gateway may be employed with nodes in a network that are not organized in a cluster. There is no teaching the prior art references of Carter et al. and Yeager et al. for the elements claimed by Applicants..."

Examiner respectfully disagrees. Yeager et al. on page 2, paragraph 0025 that various networking platform may be used in the invention disclosed in Yeager et al. and a cluster is a networking platform. Yeager et al. on page 21, paragraph 0270 that heartbeats can be used between the network node groups.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of


Art Unit: 2113

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yolanda L. Wilson whose telephone number is (571) 272-3653. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Yolanda L. Wilson  
Examiner  
Art Unit 2113